REMARKS

These amendment and remarks are submitted responsive to the Office Action, dated July 13, 2005. Each of the Examiner rejections are addressed separately below.

The specification was amended to recite the chemical names for the compounds illustrated in Figures 6A, B, and 6C. Providing the actual names for the compounds disclosed does not represent new matter.

Claim 17 was amended to recite that the device is an organic light emitting device, amended to incorporate the subject matter of Claim 18, and amended to recite a Stern-Volmer luminescence quenching constant less than 100. Support for this number (100, rather than 500) is provided in the specification at page 9, line 7. Support for the device having a charge transport layer as a separate layer from the emissive layer is provided at page 14 lines 4-14. No new matter is introduced.

The pending claim is now Claim 17, as amended herein.

35 U.S.C. § 112, Second Paragraph

Claims 17 and 18 were rejected as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. Claim 17 has been amended to recite the subject matter of formerly pending claim 18 with the recitation that the and the luminescence material has a Stern-Volmer luminescence quenching constant less than 100. Applicant traverse this rejection in view of the fact that the while there may be many luminescence materials and charge transport materials, there has never before been a good means to match which materials should be used together and which are likely to work well together. The devices made using the materials screening and selection technique as stated herein permit one to select materials without the expensive means of trial and error which often involves making tens or hundreds of devices, using various permutations and combinations of materials, and having the expense of time and purchasing of all the other materials. The devices created in accordance with Claim 17 permit the device making to use this defined technique to achieve the desired results (which could indeed change, it is not subjective once the desired goal is articulate, but the selection process need not change) in a quick, efficient and less time and material consuming way. In the end, the knowledge of what to look for and a quick means to screen through a simple, easily, never before used technique is very definite and precise, novel and non-obvious.

The Stern-Volmer constant may change with various combinations of materials as noted by the Examiner, however, by selecting materials with a Stern-Volmer constant of less than 100 and using the technique set forth in Claim 17, one is able to create device with the proper combinations of materials. For example, if one desires a red emissive and one has the

possibility of using 100 different red emitters and 100 difference charge transport materials, the expense to matching the proper materials together and creating the device can be both expensive in terms of materials consumption and device creation as well as the time that it takes to determine which pairing work for a given desired outcome.

Applicant request that this rejection be withdrawn.

35 U.S.C. § 102(b) : WO 02/02714 and U.S. Patent No. 5,698,048

The Examiner rejected Claims 17 and 18 as being anticipated, under Section 102(b) of Title 35 of the Unites States Code in view of Petrov et al. WO 02/02714 ("*Petrov*") and U.S. Patent No. 5,698,048 ("*Friend*"). Applicant respectfully traverse these rejections for the reasons provided below.

In particular, *Petrov* does not teach how to select a charge transport material based on Stern-Volmer quenching. The examiner stated "Petrov et al also teach that the layer comprising the electron transport material preferably reduces quenching (p.14, I.5-6)". In that paragraph, "reduces exciton quenching" is generally understood to mean "reduces exciton quenching by the cathode". [Emphasis added.] It is well known that metal cathode (for example, Al) used can quench the excitation luminescence so the insertion of an electron transport layer can minimize cathode quenching. In the present invention, we teach a selection method to minimize the quenching of the emitter by the transport material used, not the cathode. This is not a teaching or suggestion of the invention as recited in Claim 17, as amended.

In *Friend*, C60 is dissovled in the polymer, and is not present as a separate charge transport layer specified in the present invention. For example, in *Friend* the caption of Fig. 4 specifies polymer and C60 are present in a ratio of 10:1 in terms of Pt:C60. The device taught by *Friend* has only one organic layer sandwiched between two electrodes (figure on cover page). so it is not relevant to device having the materials as selected and matched as recited in pending Claim 17. Also the *Friend* device is not an organic light emitting device but is vaguely called "photoresponsive materials". This is not a teaching or suggestion of the invention as recited in Claim 17, as amended.

35 U.S.C. § 102(e) : U.S. Patent No. 6,310,360

The Examiner rejected Claims 17 and 18 as being anticipated under Section 102(e) of Title 35 of the United States Code in view of U.S. Patent No. 6,310,360 (*Forrest*). Applicant respectfully traverse this rejection for the reasons provided below.

In particular, *Forrest* does not teach how to select a charge transport material based on Stern-Volmer quenching. Rather, as the Examiner noted "the device may comprise a

blocking layer made of an electron-transporting material that does not quench triplets....". In this regard, Applicant notes that *Forrest* teaches "Triplets in the host material are not quenched by the blocking layer" (at column 8, line 5). It refers to the triplet of the host material, not the emitter as specified in the present invention. In *Forrest,* the host material used in the arts (for example, CBP) usually either show weak luminescence or show luminescence in an un-interesting spectral region (for example, ultaviolet). Claim 17 is directed to an organic light emitting displays based on a charge transport layer and emitter layer selected based on Stern-Volmer quenching of the emitter. This is neither naught nor suggested by *Forrest.*

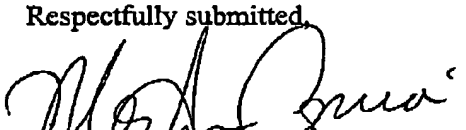
With respect to the Examiner's reading of Forrest : "TPD and CBP are both capable of exhibiting a Stern-Volmer luminescence quenching constant less than 500". Applicant respectfully disagrees. Specifically, the emitter used by Forrest is different from the emitter used in the examples of the pending application. The use of TPD or CBP as host materials for emitters in *Forrest* is not a disclosure of the devices made as described by the pending claims or the method of selecting and matching emitters and charge transport materials and their use in separate layers in an organic light emitting devices. Pending Claim 17 is directed to selecting a charge transport material having relationship with the emitter as defined by the Stern-Volmer luminescence quenching constant -- something which needs to be determined for each individual emitter.

Applicant respectfully request that this rejection be withdrawn.

CONCLUSION

In view of the foregoing, allowance of the above-referenced application is respectfully requested.

Respectfully submitted,



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Dated: November 14, 2005